REMARKS

In the Final Office Action, the Patent Office objects to the specification for "failing to provide proper antecedent basis" for certain claimed subject matter. Final Office Action, p. 2. While Applicant notes that "the exact terms need not be used *in haec verba* to satisfy the written description requirement of the first paragraph of 35 U.S.C. § 112," Applicant submits herewith amendments to the claims and specification that provides antecedent bases for the exact terminology used in the claim terms. MPEP § 706.03; *Eiselstein v. Frank*, 52 F.3d 1035, 1038, (Fed. Cir. 1995). No new matter has been added.

The claims are amended as follows:

Applicant amends the claims to recite "a fine filtering apparatus" rather than a "water cleaning device." This amendment is supported throughout the specification. For example, see the abstract and page 3, lines 32 – 33.

In addition, Applicant amends the claims to clarify that the "water jacket" is the "water guide jacket 7" as stated in the specification.

Finally, Applicant amends the claims to recite "air" rather than "gas" and recite "air inlet" rather than "gas inlet." These amendments are supported throughout the specification. For example, paragraph [0046].

The specification is amended as follows:

Applicant amends the specification to include "elongated housing" to the description of the main housing 1 in paragraph [0044]. As shown in Fig.1, the main housing 1 is clearly an elongated housing. Therefore, as described in the claims, "elongated housing" is clearly supported by the specification.

Further, Applicant amends the specification to include "a water inlet" to the description of the fine filtering apparatus in paragraph [0031]. This amendment is clearly supported by the drawings as shown in Fig. 1 at reference number 2. Therefore, as described in the claims, "water inlet" is clearly supported by the specification.

In addition, Applicant amends the specification at paragraph [0031] to clarify that the "header jacket" recited in the claims is the concentrated filtrate discharge jacket 16.

Further, Applicant amends the specification at paragraph [0045] to clarify that the "clarified water outlet" described in the claims is the clarified water discharge pipeline 3.

Finally, Applicant amends the specification at paragraph [0031] to clarify that the concentrated filtrate is discharged through a "waste outlet." This amendment is clearly supported by the drawings as shown in Fig. 1 at reference number 5. Therefore, as described in the claims, "waste outlet" is clearly supported by the specification.

The above amendments find clear support either in the written description or the drawings. No new matter has been added.

§ 103 Rejections

In addition, the Patent Office rejected claims 25-26, 28-49 under 35 U.S.C. § 103 over U.S. Patent No. 4,617,120 (hereinafter Barzuza) in view of U.S. Patent No. 6,524,481 (hereinafter "Zha"). Applicants respectfully request reconsideration in view of the remarks below.

The present invention relates to a filtering apparatus and method separating suspended solids remaining in water after biological and physiochemical treatment. The fine filtering apparatus includes flexible fibers that extend within the main body of the housing that remove fine particles from the water passing through the housing.

Independent claim 25 includes a "header jacket" including "a clarified water outlet for discharging clarified water from the cavity" and "a waste outlet for discharging a concentrated waste from the cavity". The Patent Office asserts that Barzuza discloses a "header jacket" (multi-way valve 136, clean fluid outlet 132 and flushing fluid outlet 138). Applicants respectfully urge that Barzuza does not disclose a "header jacket." A "header jacket," as claimed, is a structure enclosing a space surrounding a housing for holding backwashed concentrated filtrate discharge. See Applicants spec. para. [0031] and Fig. 1 at reference number 16. However, as shown in Barzuza at Figures 20-23, no structure encloses a space surrounding the housing 128. Moreover, nothing in Barzuza teaches or suggests that multi-way valve 136, clean fluid outlet 132 and flushing fluid outlet 138 enclose housing 128. Further, none of these elements hold backwashed concentrated filtrate, as required by claim 25. In fact, multi-way valve 136 is never in contact with backwashed concentrated filtrate. Instead, multi-way valve 136 provides access for *flushing waters* to enter the housing via tube 2 to clean the fibers. Barzuza, col. 8, ll. 6-10. The filtrate is discharged through outlet 138 via multi-way valve 134. However, even outlet 138 and multi-way valve 134 do not *hold* backwashed concentrated filtrate. Instead, the filtrate merely flows through the outlet 138 and multi-way valve 134; it is not held in outlet 138 or multi-way valve 134. Moreover, one of ordinary skill in the art would not outlet 138 or view multi-way valve 134 as a backwashed concentrate filtrate holding device. Similarly, the clean fluid outlet 132 does not hold backwashed concentrated filtrate. Indeed, clean fluid outlet 132 only discharges clean filtered water. Thus, Barzuza does not disclose a "header jacket" as claimed by Applicants. Moreover the Patent Office does not assert or suggest that Zha discloses a "header jacket" as claimed. For at least this reason, Barzuza in view of Zha cannot render claim 25 or its corresponding dependent claims obvious.

In addition, claim 25 includes a "water guide jacket extending around the first end portion of the housing." The Patent Office argues that Barzuza discloses a "water guide jacket" (bell-

like member 35). Applicants respectfully urge that Barzuza does not disclose a "water guide jacket." A "water guide jacket," as claimed, is a structure enclosing a space extending around the housing for holding influent water. The Patent Office maintains that Barzuza discloses a housing 128. Final Office Action, p. 5. However, nothing in Barzuza teaches or suggests that bell-like member 35 encloses housing 128. Alternatively, if the Patent Office argues that bell-shaped member 35 encloses housing 16 as shown in Figure 6, then Patent Office has failed to set forth how to modify this embodiment to meet each and every limitation of Applicants' claims. Specifically, the Patent Office has failed to set forth a proposed modification of Figure 6 (housing 16 and bell-shaped member 35) in Barzuza that includes "a plurality of flexible fibers extending *within* the cavity," "a water guide jacket," "a header jacket," or "an air inlet." Moreover the Patent Office does not assert or suggest that Zha discloses a "water guide jacket" as claimed. For at least this reason, Barzuza in view of Zha cannot render claim 25 or its corresponding dependent claims obvious.

Similarly, claim 39 includes a "water guide jacket" to "conduct the water into the cavity" of the housing. For reasons substantially similar to those discussed for claim 25, Barzuza as modified by Zha cannot render claim 39 or any of its corresponding dependent claims obvious.

Further claim 25 includes an "air inlet for directing air into the cavity such that the air may contact the fibers and clean some of the fine particles from the fibers." The Patent Office acknowledges that Barzuza does not disclose an air inlet, but cites Zha as disclosing an air inlet and states that it would have been obvious to one of ordinary skill in the art to have provided Barzuza with the air inlet to dislodge fouling materials from the fibers. Final Office Action, p. 7. However, in Barzuza, the fibers are "cleanable with a flushing liquid." Barzuza, col. 3, ll. 57-59. Thus, Barzuza has no need for an air inlet. Accordingly, Applicants submit that one of ordinary skill in the art would not modify Barzuza in view of Zha. Thus, Barzuza as modified by Zha cannot render claim 25 or its corresponding dependent claims obvious.

Similarly, independent claim 34 includes "an air inlet" for "cleaning some of the fine particles from the fibers." Independent claim 41 includes an "air inlet" and requires "injecting air into the treatment cavity and mixing the air with the water" and "passing the air-water mixture through the treatment cavity and contacting the fibers and dislodging the fine particles." For reasons substantially similar to those discussed for claim 25, Barzuza as modified by Zha cannot render claims 34, 41 or any of their corresponding dependent claims obvious.

Claim 28 includes a "density control plate" disposed within the housing "between the media fixing plate and the annular water guide jacket for increasing a density of the fibers" and for "inhibiting the water from flowing to the media fixing plate." The Patent Office fails to cite any "density control plate" in Barzuza that is disposed "within the housing" and "between the media fixing plate" and the "water guide jacket." Specifically, the Patent Office acknowledges that Barzuza does not disclose a "density control plate" disposed "between the media fixing plate" and the "water guide jacket." The Patent Office states, "[i]n some cases, the density control plate is between the inlet and the media fixing plate." Final Office Action, p. 11. Clearly, an *inlet* cannot be deemed a "water guide jacket" as claimed. Moreover, the Patent Office has previously cited "bell-shaped member 35" as a "water guide jacket." Assuming that this characterization is correct, which Applicants maintain that it is not, Barzuza does not disclose a "density control plate" disposed between the bell-shaped member 35 and a media guide jacket. Further, the Patent Office fails to specifically cite any element in Barzuza as a "media fixing plate." Thus, Barzuza does not teach or suggest disposing a "density control plate" between a "media fixing plate" and a "water guide jacket."

The Patent Office goes on to state that Zha discloses a "density control plate" that "is part of the media fixing plate that sits above the water inlet" and that it would have been obvious to one of ordinary skill in the art to include the density control plate of Zha in the Barzuza filtering apparatus. Final Office Action, p. 11. Notably, the Patent Office never asserts that Zha

discloses a "water guide jacket." Thus, Zha does not teach or suggest disposing a "density control plate" between a "media fixing plate" and a "water guide jacket." Thus, Zha does not disclose each element of Applicants' claim 28. Accordingly, modifying Barzuza in view of Zha would not result in Applicants' claimed invention as described in claim 28.

Further, Applicants respectfully submit that the Patent Office fails to explicitly set forth how Barzuza should be modified in order to arrive at Applicants' claimed invention. In particular, the Patent Office fails to set forth a proposed modification of Barzuza such that the density control plate is disposed between a media fixing plate and a water guide jacket. For at least this reason, Barzuza in view of Zha cannot render claim 28 obvious.

Similarly, claim 36 includes a "density control plate" disposed "between a media fixing plate and the water inlet." Claim 37 includes "openings in a member" for "dispersing the air about the fibers." Claim 37 includes "an array of openings in a media fixing plate" for "dispersing the air about the fibers." For reasons substantially similar to those discussed for claim 28, Barzuza as modified by Zha cannot render claims 36-38 obvious.

Respectfully submitted,

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